

CLAIMS

1. Elevator (2) comprising a car (4), a counterweight (6), a hoisting rope (8) for suspending the car (4) and the counterweight (6), a drive motor (10), a motor drive unit (26) for supplying the power to the drive motor (10), and a brake (18) for stopping the movement of the car (4) in an emergency situation, the elevator (2) further comprising an elevator rescue system (40), comprising an emergency power supply (42), an emergency brake switch (44) for connecting and disconnecting the power of the emergency power supply (42) to the brake (18), and an emergency drive switch (46) for connecting and disconnecting the power of the emergency power supply (42) to the drive motor (10),
characterised in that
the elevator rescue system (40) further comprises the motor drive unit (26) and a power line (74) connecting the emergency power supply (42) with the motor drive unit (26) and including the emergency drive switch (46).
2. Elevator (2) according to claim 1, wherein the emergency power supply (42) provides at least two different output voltages, wherein the brake (18) is connected via the emergency brake switch (44) to the lower voltage output (54) and wherein the higher voltage output (56) is connected to the motor drive unit (26).
3. Elevator (2) according to claim 2, wherein the emergency power supply (42) comprises a storage battery (48) and a voltage booster (50) for increasing the output voltage of the battery (48).
4. Elevator (2) according to any of claims 1 to 3, wherein the brake (18) and the motor drive unit (26) are coupled with each other in a way which allows energizing of the drive motor (10) only if the brake (18) is energized.

5. Elevator (2) according to any of claims 1 to 4, wherein the brake (26) and the motor drive unit (18) are coupled with each other in a way which allows energizing of the brake (26) only if the motor drive unit (18) is energized.
6. Elevator (2) according to any of claims 1 to 5, further comprising a main power switch (86) for disconnecting main power supply to the elevator (2), wherein the emergency brake and/or the emergency drive switches (44; 46) are coupled with the main power switch (86) in a way which allows energizing of the brake (18) and/or the drive motor (10), respectively, only if the main power supply is disconnected.
7. Elevator (2) according to any of claims 1 to 6, further comprising a safety chain which is connected with a safety chain input (80) of the motor drive unit (26), wherein the emergency power supply (42) comprises a safety chain voltage output (58) which provides a safety chain voltage to the safety chain input (80) of the motor drive unit (26) via the emergency drive switch (46).
8. Elevator (2) according to any of claims 1 to 7, wherein the motor drive unit (26) further includes a control input (84) which is connected via the emergency drive switch (46) to a voltage output (54) of the emergency power supply (42), wherein the motor drive unit (26) is designed to provide to the drive motor (16) a power supply according an emergency rescue mode if a pre-determined voltage is applied to its control input (84).
9. Elevator (2) according to any of claims 1 to 8, further comprising a door zone indicating device (64), wherein the door zone indicating device (64) is connected to the elevator rescue system (40) for stopping the car (4) at a landing (72) once the door zone indicating device (64) has signalled that the car (4) is positioned at a landing (72).

10. Elevator (2) according to any of claims 1 to 9, further comprising a speed control unit (24) for controlling the speed of the car (4), which is connected to the brake (18).